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1 14. (New) A combination fluid cooled cutting tool and coolant
2 supply system wherein the combination comprises:

3 a fluid cooled cutting tool comprising:

4 at least one coolant orifice having a total flow area for
5 applying a coolant to said cutting tool; and

6 a programmable, variable volume and pressure coolant supply
7 system comprising:

8 at least one fluid pressure transducer for monitoring the
9 pressure of said coolant;

10 a pump having an inlet and an outlet for providing
11 pressurized coolant to said coolant orifice;

12 an electrical AC pump motor operatively connected to said
13 pump;

14 a coolant supply line, said coolant supply line extending
15 between said pump outlet and said coolant orifice, to supply said
16 coolant under pressure to said coolant orifice;

17 a coolant return line, said coolant return line extending
18 between said cutting tool and said pump inlet, for returning said
19 coolant to said pump inlet after said coolant exits said coolant
20 orifice;

21 a coolant catch pan located between said cutting tool and
22 said coolant return line, said coolant catch pan receiving said
23 coolant exiting said coolant orifice and directing it into said
24 coolant return line;

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Amended
25 a coolant filter in said catch pan, to remove impurities
26 from said coolant exiting said orifice prior to directing said
27 coolant into said coolant return line;

28 a variable frequency drive electrically connected to said
29 pump motor, said variable frequency drive providing AC power to
30 said pump motor at various frequencies thereby controlling the speed
31 of said pump motor; and

32 a computer programmed with data of said total flow area
33 of said coolant orifice, said computer monitors the coolant
34 pressure by said pressure transducer;

35 wherein said computer determines a desired speed of said pump
36 motor based on the coolant pressure and the total flow area of said
37 coolant orifice and said computer controls said variable frequency
38 drive to provide said pump motor with AC power at a frequency that
39 results in said pump motor running at said desired speed.

REMARKS

By the present amendment, Applicant has added Claim 14. Claims 1-14 remain pending in the present application. Claims 1, 7 and 14 are independent claims.

The Office Action

In the recent Office Action (Paper No. 3) the Examiner rejected Claims 1-4 and 7-11 under 35 U.S.C. § 103(a) as being